

Lean Production

8 marks

IGCSE Paper 2

Identify and explain **two** ways SA could use lean production in its factory.

Way 1 *Just in Time*

Explanation *means that inventory is reduced to no or very low levels held in storage. This reduces the need for having warehouse space to hold the ingredients to make soap. SA will need to have good relationships with its suppliers to ensure that the flow production line is not interrupted by inventory running out.*

Way 2 *Kaizen*

Explanation *SA meaning “constant improvement” by using Kaizen in flow production of mass produced soap workers will feel more motivated and it will also reduce waste and costs leading to higher profits.*

Soap Additions (SA)

SA is a public limited company. It was started 20 years ago in country Z. SA manufactures soap that is sold to the mass market. The soap is produced in a factory employing 100 production workers. The Operations manager thinks that well-motivated employees are important.

SA soap is sold for a low price to wholesalers and retailers throughout country Z. The product is sold and packaged either as bars of soap or liquid soap in a bottle. SA has a 50% share of the total market for low price soap.



The directors of SA want to expand the business by starting to produce different types of soap aimed at niche markets. The products they want to develop are:

- Luxury soap aimed at high income consumers
- Soaps aimed at improving ageing skin
- Medicated soap to help improve bad skin often experienced by teenagers

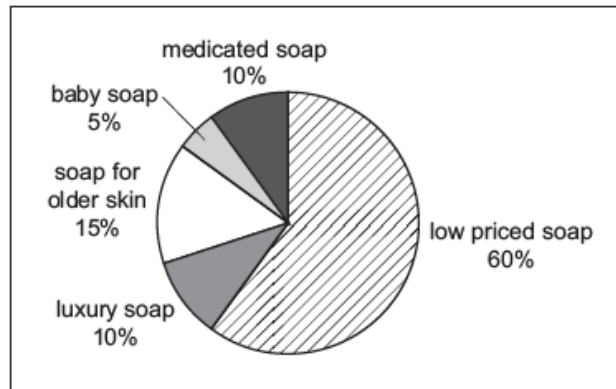
The manufacturing process for the mass produced soap is automated and uses flow production. However, if the new soaps are produced then they will be manufactured in a new factory using batch production. The new factory and equipment will cost \$15m and will require 50 more production workers and a new Operations manager.

SA does not use lean production in its existing factory. However, the Managing Director thinks SA would benefit from the introduction of lean production into both the existing and new factory.

Some of SA's managers think they are never involved when important decisions are made. The directors of SA disagree about which leadership style will lead to the best decisions being taken.

Appendix 1

Total soap sales in country Z of \$200m in 2018



Appendix 2

Newspaper article in Daily News - 15 April 2019

Economic growth in country Z is increasing and is now at 8% per year. Average wage rates are increasing. Many people now work in cities rather than on farms in rural areas.

Multinational companies sell products in country Z as well as setting up factories here. Increased globalisation has encouraged the government of country Z to sign a trade agreement with other countries. It is meant to encourage increased trade between these countries and further economic development of country Z. However, not all businesses in country Z are pleased with this trade agreement.

Appendix 3

Financial information from SA's balance sheets for 2017–2018

	2017	2018
Non-current assets (\$m)	40	40
Inventories (\$m)	5	10
Trade receivables (\$m)	4	4
Cash (\$m)	1	1
Current liabilities (\$m)	5	5
Bank loan (\$m)	10	20
Current ratio	2:1	?
Acid test ratio	1:1	?
